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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,541	10/28/2003	Stephen P.A. Fodor	56297-5003-21	3654

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EXAMINER	
GOLDBERG, JEANINE ANNE	
ART UNIT	**PAPER NUMBER**
1634	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,541	FODOR ET AL.	
	Examiner	Art Unit	
	Jeanine A. Goldberg	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-30 and 32-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-30 and 32-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the papers filed November 20, 2006. Currently, claims 26-30, 32-55 are pending. All arguments have been thoroughly reviewed but are deemed non-persuasive for the reasons which follow.

2. Any objections and rejections not reiterated below are hereby withdrawn.

Maintained Rejections

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 26-35, 38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 22 of U.S. Patent No. 6,852,488

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by

or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

Although the conflicting claims are not identical, they are not patentable distinct from each other because Claims 26-35, 38 of the instant application is generic to all that is recited in Claim 22 of U.S. Patent No. 6,852,488. That is, Claim 22 of 6,852,488 falls entirely within the scope of Claim 26-35, 38 or in other words, Claim 26-35, 38 is anticipated by Claim 22 of 6,852,488. Here, claim 22 of U.S. Patent No. 6,852,488 recites a method of detecting a mutation in a target nucleic acid sequence vs a known sequence by exposing a target sequence to at least one known core sequence where the core sequence is attached to a beach; determining the binding affinity to the target sequence and comparing affinity (i.e. hybridization) to detect a mutation. Claim 7 of '488 is drawn to probes of between 5-100 bases in length (instant Claims 31-33).

4. Claims 26-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-53of U.S. Patent No. 6,440,667.

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d

1428, 46 USPQ2d 1226 (fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

Although the conflicting claims are not identical, they are not patentable distinct from each other because Claim 26-55 of the instant application is generic to all that is recited in Claim 1-53 of U.S. Patent No. 6,440,667. That is, Claim 1-53 of 6,440,667 falls entirely within the scope of Claim 26-55, or in other words, Claim 26-55 is anticipated by Claim 1-56 of 6,440,667. Here, claim 39, for example, of U.S. Patent No. 6,440,667 recites a method of identifying a target nucleic acid in a sample by contacting a target sample with a collection of beads that bear different probe nucleic acids and a probe encoding system. Based on hybridization, the different probes on the beads identify the target nucleic acid.

Response to Arguments

The response does not address the double patenting rejections.
Thus for the reasons above and those already of record, the rejection is maintained.

5. Claims 26-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-25 of U.S. Patent No. 6,544,739.

An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d

1428, 46 USPQ2d 1226 (fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

Although the conflicting claims are not identical, they are not patentable distinct from each other because Claim 26-55 of the instant application is generic to all that is recited in Claims 1-25 of U.S. Patent No. 6,544,739. That is, Claims 1-25 of 6,544,739 falls entirely within the scope of Claim 26-55, or in other words, Claim 26-55 is anticipated by Claims 1-25 1-56 of 6,544,739. Here, claim 23, for example, of U.S. Patent No. 6,544,739 recites a method of identifying different biological entities by providing a plurality of markers which comprise a different and unique nucleic acid, combining the sample with a unique and determinable nucleic acid sequence and identifying the sequence. Beads comprising a plurality of nucleic acid probes attached thereto are provided under hybridization conditions.

Response to Arguments

The response does not address the double patenting rejections.

Thus for the reasons above and those already of record, the rejection is maintained.

REASONS FOR ALLOWANCE

6. The following is an examiner's statement of reasons for allowance.

The claims are drawn to a method of analyzing expression of one or more genes using a collection of at least 100 bead where the beads each have different sequences attached thereto where the nucleic acid sequences are between 25-100 nucleotides in length.

The closest prior art, namely Drmanac, teaches the use of short sequences of probes connected to discrete particles (beads) for analysis in a hybridization assay. Drmanac specifically discusses the benefit of small oligonucleotides with lengths of 4-20 nucleotides. As clearly pointed out by the response filed November 20, 2006, Drmanac teaches away from using the longer nucleotides on beads as suggested by Ghosh. The ordinary artisan would not be motivated to use the longer nucleotides of Ghosh on beads given the teachings of Drmanac that 20-mers are sufficient and 17-mers are most suitable.

Thus, the prior art does not teach nor suggest all of the limitations of the instant claims.

Conclusion

7. No claims allowable.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Monahan et al. (EP 0 154 505) teaches diagnosis of gene abnormalities by restriction maping using a sandwich hybridization format. The method of Monahan does not specifically teach a plurality of different target sequences. The method appears to teach analysis of a single polymorphism.

B) Malcolm et al. (WO 86/03782, July 1986) teaches sandwich hybridization for detection of nucleotide sequence.

C) Dattagupta et al. (EP 0 130 515 A2, January 9, 1985) teaches testing DNA samples for particular nucleotide sequences.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jeanine Goldberg whose telephone number is (571) 272-0743. The examiner can normally be reached Monday-Friday from 7:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571) 272-0735.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The Central Fax Number for official correspondence is (571) 273-8300.

J. Goldberg

Jeanine Goldberg
Primary Examiner
February 20, 2007